

Name: _____ #: _____

roll it With Powers of Ten



Powers of ten can be really fun! A lot of times, multiplying or dividing by powers of ten is easy once you figure out the pattern. You can complete the activity by either rolling a die or by filling in the roll square with a number of your choice. Complete the "roll" square's filled in you can complete the rest of the table. After you are done, write a "rule" for multiplying & dividing by powers of ten.

Power of 10	Written w/ Exponents	Product of Exponents	Conclude	Problem	Answer	Conclude
Roll exp. = 3 10 ³	$10 \times 10 \times 10$	1,000	The product has: _____ Zeros	$1,234.567 \times 10^3$	1,234,567.	I $\times \div$ so my decimal moved to the R L Three places.
Roll 1 = _____ 10			The product has: _____ Zeros	$1,234.567 \times 10^{\quad}$		I $\times \div$ so my decimal moved to the R L _____ places.
Roll 2 = _____ 10			The product has: _____ Zeros	$1,234.567 \times 10^{\quad}$		I $\times \div$ so my decimal moved to the R L _____ places.
Roll 3 = _____ 10			The product has: _____ Zeros	$1,234.567 \times 10^{\quad}$		I $\times \div$ so my decimal moved to the R L _____ places.
Roll 4 = _____ 10			The product has: _____ Zeros	$1,234.567 \div 10^{\quad}$		I $\times \div$ so my decimal moved to the R L _____ places.
Roll 5 = _____ 10			The product has: _____ Zeros	$1,234.567 \times 10^{\quad}$		I $\times \div$ so my decimal moved to the R L _____ places.
Roll 6 = _____ 10			The product has: _____ Zeros	$1,234.567 \div 10^{\quad}$		I $\times \div$ so my decimal moved to the R L _____ places.
Roll 7 = _____ 10			The product has: _____ Zeros	$1,234.567 \times 10^{\quad}$		I $\times \div$ so my decimal moved to the R L _____ places.
Roll 8 = _____ 10			The product has: _____ Zeros	$1,234.567 \div 10^{\quad}$		I $\times \div$ so my decimal moved to the R L _____ places.

Based on your findings above, what can you conclude about multiplying numbers by powers of ten? _____

Based on your findings above, what can you conclude about dividing numbers by powers of ten? _____

